

CLAIMS

1. A single piece, hollow plastic door formed by the following process comprising:

5 forming from a molten plastic resin by a gas-assisted injection molding system including a mold having an article-defining cavity and an injection aperture wherein molten plastic resin is injected through the injection aperture and wherein pressurized fluid is communicated to the molten plastic resin in the door-defining cavity to at least partially distribute the molten plastic resin, wherein the door is concave in shape so as to press against a panel held between two
10 halves of the door frame.

2. A method of making a molded plastic article comprising:

providing a mold;

injecting into the mold a thermoplastic resin;

15 injecting into the mold a fluid under pressure capable of forming a fluid channel in the injected thermoplastic resin;

holding the fluid in the mold, the fluid pressing the thermoplastic resin against the mold;

allowing the thermoplastic resin to solidify in the mold;

venting the fluid; and

20 removing the article from the mold.

3. The method of claim 2 wherein the mold is a two part mold.

4. The method of claim 2 further comprising a plurality of nozzles capable of introducing the fluid or resin into the mold associated with the mold.

5. The method of claim 2 wherein the thermoplastic resin is selected from at least one of the group consisting of polypropylene, polyvinyl chloride, heat deflective plastic, PCASA, and ABS.
6. The method of claim 2 wherein the fluid is selected from the group consisting of nitrogen gas, micromicelle, foam, and water.
7. The method of claim 2 wherein the article is selected from the group consisting of a door, a door frame, and a door with muntins.
8. The method of claim 2 wherein the resin is colored.
9. The method of claim 2 further comprising injecting the fluid using a nozzle.
10. The method of claim 2 further comprising injecting the fluid using a gas pin.
11. The method of claim 2 further comprising injecting the thermoplastic resin using a nozzle.
12. A door made by the method of claim 2.
13. The door of claim 12 further comprising a first skin and a second skin, the first skin and the second skin capable of association to form an assembled door.
14. The door of claim 13 further comprising:
a plurality of muntins forming a plurality of lites in the door; and
a sheet of material held between the first skin and the second skin,
wherein the sheet of material is visible through the lites in the assembled door.
15. The door of claim 12 having an exterior surface.
16. The door of claim 15 wherein the exterior surface is smooth.
17. The door of claim 15 wherein the exterior surface is patterned.

- 18. The door of claim 15 wherein the exterior surface is sink free.
- 19. The door of claim 12 having an interior surface.
- 20. The door of claim 19 further comprising a rib projecting from the interior surface.

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- 21. The door of claim 13 wherein the first skin and the second skin are capable of snap-fit association.
- 22. The door of claim 13 further comprising an insulating material sandwiched between the first skin and the second skin.